

REMARKS

Claims 1, 10 and 16 have been amended. Claims 1-13, 16 and 17 are pending. Applicant reserves the right to pursue the original claims and other claims in this and in other applications.

Claims 1-13, 16 and 17 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite. Claims 1, 10 and 16 have been amended to overcome the rejection and the claims have support in the specification, paragraphs [0068]+.

Claims 1-13, 16 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,919,235 ("Yamazaki") in view of U.S. Patent No. 6,353,189 ("Shimada"). Reconsideration is respectfully requested. The amendment made to the independent claims emphasize the distinction over the prior art.

Contrary to the Office Action, there is nothing in Yamazaki, FIG. 9, that can be construed to "include a plurality of metal wiring layers spaced apart from each other and arranged in a vertical stack." The Office Action dated September 21, 2005 cited the "black mask 609" shown by Yamazaki in FIG. 9 as being a heat conduction part. The black mask 609, however, is produced by forming and patterning a metallic film which results in one solid layer conforming to the shape of the second interlayer insulating film 607. Furthermore, because the black mask 609 is one layer of metal, it does not include "a plurality of metal via layers connected to the metal wiring layers and coupling the metal wiring layers with each other," as recited by claim 1.

The Office Action relies on Shimada to teach a structure of metal wiring layers connected by conductive via layers. The wiring board in Shimada has a shield pattern

formed in parallel with a line and through an insulating layer, and conductive pillars that connect two conductors. There is nothing in Shimada that teaches a heat conduction part providing a path different from a signal transmission path.

Furthermore, there is no apparent reason to combine the wiring board of Shimada with Yamazaki's device to make a semiconductor device having a heat conduction part with a stack of metal wiring layers coupled to each other by metal via layers, and the heat conduction part providing a path different from a signal transmission path. For all of these reasons, claim 1, as amended, should be allowable over Yamazaki and Shimada.

Claims 2-13, 16 and 17 either depend from claim 1 or contain limitations similar to those discussed above in connection with claim 1. Therefore, claims 2-13, 16 and 17 should be allowable over the Yamazaki and Shimada combination for at least the same reasons as claim 1. In view of the above, applicant believes the pending application is in condition for allowance.

Dated: June 20, 2007

Respectfully submitted,

By 

Mark J. Thronson

Registration No.: 33,082

Ranga Sourirajan

Registration No.: 60,109

DICKSTEIN SHAPIRO LLP

1825 Eye Street, NW

Washington, DC 20006-5403

(202) 420-2200

Attorneys for Applicant